

DOCUMENT RESUME

ED 062 342

TE 002 893

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TITLE The Comparative Listenability of Shortwave  
Broadcasts.  
PUB DATE 71  
NOTE 4p.  
JOURNAL CIT Journalism Quarterly; v48 n4 p744-748 Winter 1971  
EDRS PRICE MF-\$0.65 HC-\$3.29  
DESCRIPTORS \*Comparative Analysis; \*English (Second Language);  
Evaluation; \*Journalism; Language Research; Language  
Styles; \*Listening Skills; \*Media Research; News  
Media; Program Evaluation; Surveys; Testing; Test  
Results; Word Recognition  
IDENTIFIERS Dale Chall Formula; Europe; Flesch Formula; Southeast  
Asia; \*Voice of America

ABSTRACT

A study to analyze selected shortwave broadcasts in terms of the Flesch formula for readability is presented. The study attempted to qualify elements of style based on their scripted word usage and to compare and contrast the news broadcasts of four countries in terms of gross listenability. A number of studies were conducted which applied the Dale-Chall formula and the Flesch formula, as well as tests on the listenability-readability concept. News scripts of the Voice of America's English language broadcasts to Southeast Asia over the period of one week were examined. In addition, the shortwave news broadcasts of Russia, Britain and West Germany were taped and examined. It was found that on the basis of the scores recorded for the Voice of America broadcast that the news reports may have been prepared at a more difficult level than was intended. The study indicates that the matter of style evaluation should be given serious consideration by U.S.I.A. (CK)

ED 062342

*Reprinted from JOURNALISM QUARTERLY, Vol. 48, No. 4 (Winter 1971), pp. 744-48*

## The Comparative Listenability of Shortwave Broadcasts

By M. Timothy O'Keefe

► At present, most international shortwave broadcasting is conducted by national governments with one purpose in mind: to attempt to favorably dispose the listeners to the point of view of the national government.

Various audience surveys have been conducted to determine who and what kind of people listen to these broadcasts. However, little work appears to have been done in examining the content of the broadcasts in an attempt to deduce the probable makeup of the audience.

The purpose of this study was to analyze selected shortwave broadcasts in terms of the Flesch formula for readability.<sup>1</sup> The study attempted to quantify elements of style based on their scripted word usage and to compare and contrast the news broadcasts of four countries in terms of gross listenability.

There is considerable basis for the application of readability formulae—which predict the reading ease of written materials—to the spoken language.

One of the first studies which attempted to show the validity of measuring listenability in terms of readability was conducted by Chall and Dial.<sup>2</sup> Applying the Dale-Chall formula and that of Flesch to 18 newscasts heard by college freshmen, they found that predictions of readability can be applied to listening difficulty.

Correlations of .74 for the Dale-

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Chall formula and .72 for the Flesch formula were found between readability scores for the material and actual listener comprehension. It was found that judgments of interest and of difficulty correlated .93.

Cartier, in testing three difficulty levels of seven stories, found that the difficulty predictions did appear to be consistent with listener comprehension scores.<sup>3</sup> He found that the human interest aspect as defined by Flesch had no significant effect on listenability.

A more extensive series of tests were run by Harwood on the listenability-readability concept. He found, as might be expected, that language rated in the "difficult" categories was more comprehensive when presented for reading than for listening.<sup>4</sup>

In examining the rate of copy presentation to an audience, Harwood found that while in general listenability did decrease with an increase in the speed of presentation, mean listenability at each of the four rates studied did not differ significantly.<sup>5</sup>

He concluded that readability scores might be used as gross indicators or predictors of listenability if accuracy of the order not more than plus or minus one rank of listenability within a total range of seven (the Flesch scale) is acceptable. The scale runs from the very difficult to the very easy. (See Table 1)

Carter has studied the cross-cultural application of the Flesch formula as a predictor for readability and found the results satisfactory.<sup>6</sup> Using a group of Filipino college students, he found that the Flesch reading ease correlated .79 with the students' rating of the material on the easy/difficult dimension.

### Procedure

No cross-cultural applications of the Flesch formula to listenability could be found, but it did not seem unreasonable to assume that many of the factors uncovered above would hold true for a foreign audience, since Carter's study

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TABLE 1

## The Flesch Rating System

Reading Ease Score	Description of Style	Estimated Schooling Needed for Comprehension	Typical Magazine
0 to 30	Very Difficult	College	Scientific
30 to 50	Difficult	High School or Some College	Academic
50 to 60	Fairly Difficult	Some High School	Quality
60 to 70	Standard	7th or 8th Grade	Digests
70 to 80	Fairly Easy	6th Grade	Slick Fiction
80 to 90	Easy	5th Grade	Pulp Fiction
90 to 100	Very Easy	4th Grade	Comics

showed that the same factors that determine reading comprehension for American audiences are also valid for foreign nationals.

With this in mind, news scripts of the Voice of America's English language broadcasts to Southeast Asia over the period of one week were examined according to the Flesch reading ease formula. On the basis of earlier research, the Human Interest formula was not included because it appears to have been proven unreliable as a measure of listenability.<sup>7</sup>

Half of the VOA scripts were in the regular English broadcasts, aimed primarily at the opinion leaders in Southeast Asia, such as journalists, teachers and college students.

The other half were in Special English, a simplified form of English that is intended for listeners who are not fluent in the language. The Special English scripts are limited to a 1200-word vocabulary and are spoken more slowly than normal news broadcasts.

In addition, the shortwave news broadcasts of three other countries—Russia, Britain and West Germany—were taped and examined according to the Flesch reading ease formula.

By such an examination it was intended to show the difficulty levels of the different broadcasts in relation to one another and in relation to the type of audience being reached according to the Flesch educational index.

## Findings

*Regular Versus Special English.* The results showed that, according to the Flesch readability scores, the Voice of America material was aimed at a high education audience level. In the Special English broadcasts the highest scoring single news story rated a 72.498, considered to be "fairly easy," but the overall average for this Special group was a 50.609, which is bordering just between "difficult" and "fairly difficult." Table 2 shows the results by news categories.

This score of 50.609 for Special English was slightly higher than that for the regular English broadcasts, which rated a 42.189 for the week.

Four of the Special English news categories scored in the 60s or the standard level of difficulty, while none of the regular English transmissions were this high. Only one regular English broadcast category scored as high as "fairly difficult"; eight were at the "difficult" level and two noted as "very difficult."

The Special English broke down in this manner: four were in the standard level of difficulty, two were in the "fairly difficult" category and six were in the "difficult" category.

*The Four-Country Comparison.* The tapes of the broadcasts in the four-country comparison were taken from a period different from that used in the

*Research in Brief*

TABLE 2

A Comparison of the Regular English and Special English  
Broadcasts of the Voice of America to Southeast Asia  
According to the Flesch Formula for Reading Ease

Regular English Overall score: 42.189	News Subject Category	Special English Overall score: 50.609
44.541	Vietnam	42.899
41.941	Middle East	47.862
31.755	Pope Paul	63.321
42.569	United States	49.154
54.379	Accidents	62.073
26.744	Russia	37.784
37.433	Asia	52.348
29.201	Africa	35.078
	Europe	52.250
46.331	Space News	62.169
43.741	United Nations	43.059
33.874	Miscellaneous	62.729

regular and Special English comparison. The VOA broadcasts used were the regular English news reports to Southeast Asia. The Moscow, British and West German reports, also in English, were beamed to the U.S.

The comparison of these news reports showed that the Voice of America broadcasts (at 48.570 or a "difficult" rating) were at an easier level than those of the others but not to any great extent. The other three countries were also rated "difficult" and very closely grouped: Radio Deutsche Welle was ranked second with a 40.715; the B.B.C. World Service was next with a 38.269, and Radio Moscow was last with a 37.239.

The only subject category that was covered with any consistency by these four countries was the Vietnam situation. None of the other news categories were reported often enough by all four to supply what would be considered an adequate sample of several hundred words.

The Vietnam scores were as follows: Voice of America, 46.657; Radio Deutsche Welle, 40.160; Radio Moscow,

36.463; and B.B.C. World Service, 32.028.

*Discussion*

It would appear on the basis of the scores recorded for the Voice of America Special English broadcasts that these news reports may have been prepared at a more difficult level than was intended.

L. John Martin, chief of the Program Analysis Division, Office of Policy and Research of the United States Information Agency, outlined the target audience in this way:

The audience we attempt to reach through our radio broadcasts to Southeast Asia may be thought of in terms of a primary and secondary one. Our primary target audience comprises opinion leaders such as journalists, teachers, college students and decision makers in all walks of life. This audience is made up of adults with at least a secondary education. But since radio is a mass medium, and since physical communications are not very well developed in that part of the world, we also try to reach the farmers and villagers and more especially their leaders. These peo-

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ple do not always have a formal education beyond the primary level... Special English... is intended for listeners who are not fluent in the language.<sup>8</sup>

According to the Flesch educational scaling, most of the listeners to the Special English broadcasts would have the equivalent of at least a seventh grade American education to understand even the simplest broadcasts. Listeners would require some high school or college training to understand fully all the news reports.

The Voice of America may also be unnecessarily limiting its audience with its regular English broadcasts. Harwood reported that as material became more difficult, it was significantly more comprehensible when presented for reading than for listening.<sup>9</sup> Virtually all of the regular English broadcasts fell in one of the difficult categories, and thus may have caused greater comprehension difficulty than the scores point out.

The Voice is broadcasting to an audience whose native language is not English. Yet when its listenability score was compared to that of three other stations who were broadcasting to English speaking audiences, the VOA's listenability was not rated as being much easier than the others.

Of course the only reliable way to verify these findings is with an on-the-spot analysis of the audience receiving the news reports. The listenability scores reported here are intended to serve only as rough estimates.

Perhaps it will be found that the Voice of America should re-evaluate its style much in the same way the As-

sociated Press did some years ago when it learned that it was writing above its audience.

The style could be made more listenable without sacrificing quality or giving the audience the impression that it is being talked down to. This would be such a minor change, and the possible advantageous results would make the effort worthwhile. It appears that no charge of oversimplification was made against the AP after it improved its readability.

The study indicates that the matter of style evaluation should be given serious consideration by U.S.I.A.

<sup>1</sup> Readability formulae are a method of measurement intended as predictive devices that provide quantitative, objective estimates of the style difficulty of writing. The idea behind readability measurement is the matching of reader and printed material. It assumes that readers differ in their ability to read and that the printed material in turn varies in readability; that the material varies in the amount and kind of ability needed to read and understand it. The Flesch reading ease formula, which is considered one of the most reliable, measures style difficulty according to sentence length and the number of syllables per 100 words. Since 1923 at least 29 methods of measuring readability have appeared in the literature.

<sup>2</sup> J. S. Chall and H. Dial, "Predicting Listener Understanding and Interest in Newscasts," *Educational Research Bulletin*, 27:141-53.

<sup>3</sup> F. A. Cartier Jr., "Listenability and Readability Formulae," *Speech Monographs*, 22:53-7, March 1955.

<sup>4</sup> Kenneth Harwood, "Listenability and Readability," *Speech Monographs*, 22:49-53, March 1955.

<sup>5</sup> Kenneth Harwood, "Listenability and Rate of Presentation," *Speech Monographs*, 22:57-9, March 1955.

<sup>6</sup> R. E. Carter Jr., "Cross Cultural Application of Four Flesch Formulas," *JOURNALISM QUARTERLY*, 32:487-9, Fall 1955.

<sup>7</sup> George R. Klare, *The Measurement of Readability* (Ames: Iowa State University Press, 1963), pp. 148-53.

<sup>8</sup> Letter from L. John Martin to the author.

<sup>9</sup> Harwood, "Listenability and Readability," p. 52.

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